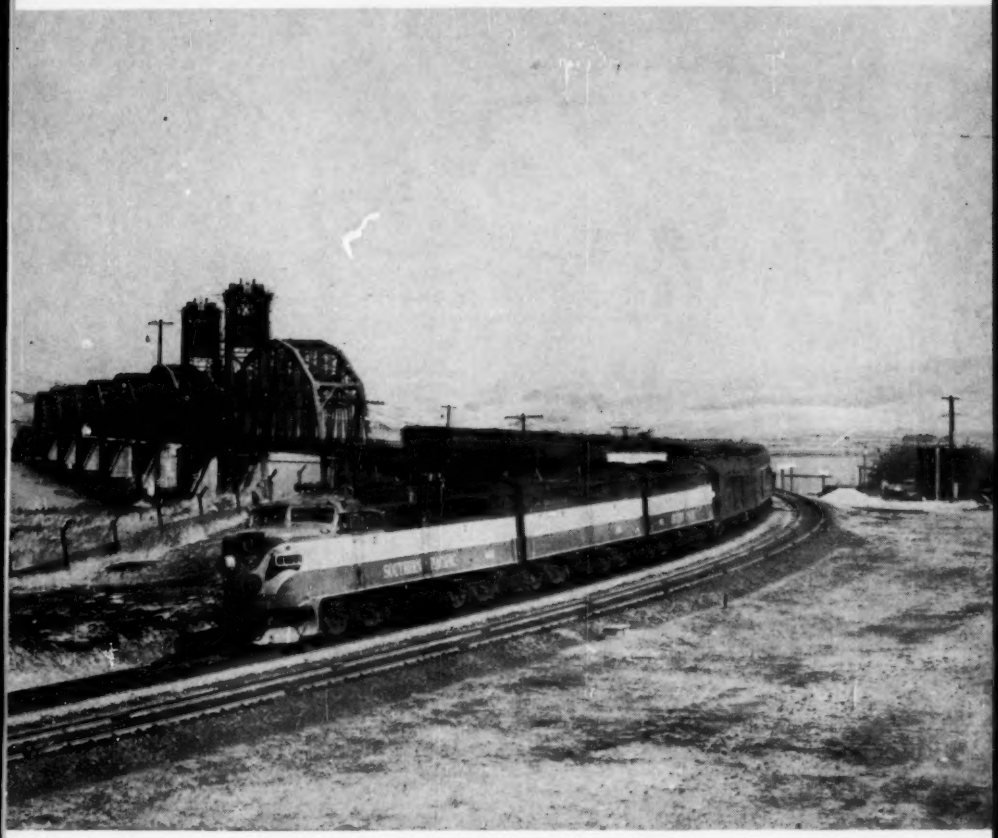
The WESTERN RAILROADER

For the Western Railfan



Train No. 1-11 southbound over the Benicia Bridge.

VOL. 23, NO. 5 MAY, 1960 ISSUE 245

Excursions

May 15 — Central Coast — Santa Fe and Sierra Railroad.

May 27-30 — Bay Area Electric — Covering the Milwaukee electrification, going Western Pacific and returning Southern Pacific.

June 5 — R&LHS — Party trip over SP to Roseville for dedication of Hal Wilmunder's narrow gauge operating museum.

June 11-12 — Nor-Cal — Crater Lake, using Shasta Daylight.

July 2-4 — Cal-Nevada — Weekend trip destination and route indefinite as of press time.

July 17 — Nor-Cal — Petaluma & Santa Rosa.

July 31 — Joint annual picnic trip to Big Trees.

Sept. 2-5 — Central Coast — Repeat of Grand Canyon trip with routing via California Cutoff and Peavine during daylight hours, returning main line all the way. Full day at the Canyon.

Sept. 24-25 — Pacific Coast Chapter — Reno via Western Pacific, returning Southern Pacific. Will cover Quincy Railroad.

Oct. 1 and 2 — Cal-Nevada — Sierra Railroad.

Oct. 7-23 — Cal-Nevada and Pacific Coast Chapter — Central American and Mexican railroad tour.

Nov. 29 — Joint Excursion Board meeting in WP Building, San Francisco.

Bay Area Cars Have New Home

The Bay Area Electric's cars SN 62 and SF Muni 178 were moved to the refrigeration spur of the Sacramento Northern in the Yuba City yards on March 16 from the former location at the Diamond Match lumber yard as the property had been sold. They were moved under their own power.

Crater Lake Holiday

The Northern California Railroad Club will have a group trip via the Shasta Daylight to Crater Lake on June 11-12. The group will leave Saturday morning, spend Saturday night in hotels in Klamath Falls. Sunday morning the group will travel by charter bus to Crater Lake with sightseeing tour around the lake. Returning to Klamath Falls early in the afternoon the group will return on the Shasta Daylight. Fare about $35. Write: Francis Guido, P.O. Box 668, San Mateo.

Passenger to Jimtown

The Central Coast Railway Club will run a trip to Jamestown on Sunday, May 15, via Santa Fe and Sierra Railroad. The group will travel via the Golden Gate, No. 60, leaving Richmond at 8:45 a.m. with bus connections from San Francisco and Oakland. The train will arrive at Riverbank at 10:37 a.m. and passengers will transfer to a Santa Fe special over the branch to Oakdale. The Santa Fe coaches will be turned over to the Sierra for a roundtrip to Jamestown behind Sierra steam engine 28. The passengers will transfer at Riverbank to Golden Gate train 63 for arrival back at Richmond at 8:55 p.m. with usual bus connections to other Bay Area points. Fares are $13.50 from San Francisco, Oakland and Berkeley; $13.00 from Richmond, and $11.00 from Stockton. Write Central Coast Railway Club, P.O. Box 783, San Jose, California.

Construction of piers of Benicia Bridge on October 1, 1929

The Benicia Bridge

The Martinez-Benicia bridge was opened to regular train service on October 15, 1930, when at 11:44 a.m., locomotive No. 2442, with engineer C. E. Hudson at the throttle, poked its nose out onto the span at the south approach and pulled the "Governor," in charge of conductor A. L. Johnson, across the gigantic steel structure. A few minutes later the westbound "El Dorado" crossed, in charge of conductor William Schwab and engineer T. M. Stine. With this double event, the $12,000,000 project took its place as another unit in the Southern Pacific's ever-developing transportation system.

Heralded as one of the outstanding railroad bridge achievements of the country, the structure was formally dedicated to public service on Nov. 1, 1930, at a ceremony in which President Paul Shoup, United States Senator Samuel M. Shortridge, Mayor James Rolph Jr., public officials and railroad officers participated. The program was sponsored by the Martinez Chamber of Commerce, and the span was christened by a queen chosen from contestants representing neighboring cities.

A pageant depicting rail progress was led by the historic locomotive "C. P. Huntington," No. 1 of Southern Pacific engines, while one of the company's steam behemoths represented the modern locomotive. Boat races, an air circus, and fireworks were other features of the program which at-

tracted several thousand people from San Francisco bay area cities and central California.

The 5603-foot bridge was the longest and heaviest two-track structure west of the Mississippi river when opened and was not exceeded in its load carrying capacity by any bridge in the country. It spans Suisun Bay, in the upper reaches of San Francisco Bay near the confluence of the Sacramento and San Joaquin rivers, and is located about a mile and a half east of the former train-ferrying point between Benicia and Port Costa.

Erected in 18 months of record construction, during the course of which engineering achievements attracted nation-wide attention, its inauguration in train service marked the finish of the west's greatest construction project for 1929-30. Its completion caused retirement of the "Solano" and "Contra Costa," largest ferry boats in the world, which were for so many years a fascinating part of transcontinental rail service and made possible the faster and more convenient handling of passenger and freight trains over the Overland and Shasta routes.

Unusual features in construction of the bridge were: first, creation of artificial islands of sand by means of which concrete piers were built above water and sunk to bedrock; second, use of a deep-sea diver to examine all pier foundations; third, construction of piers resistant to earthquake shock; and fourth, temporary use of one of the steel deck spans as falsework during construction of the permanent spans across deep water.

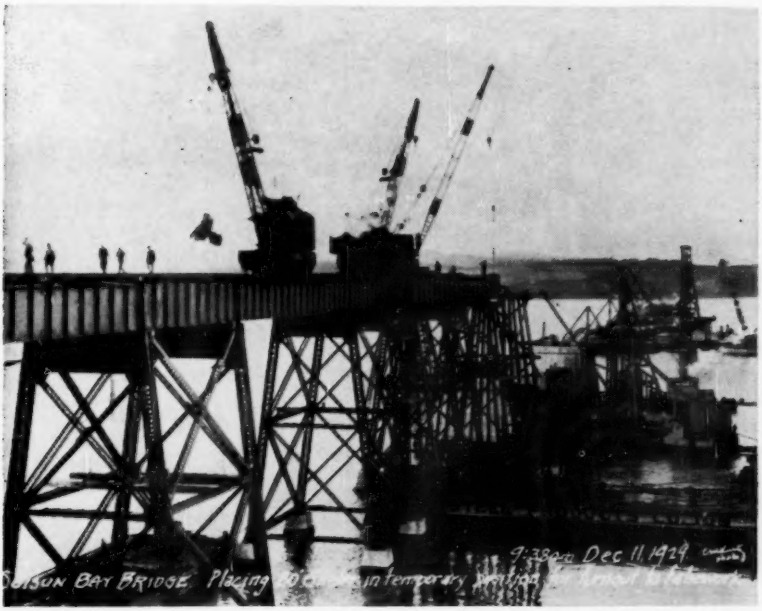
The deep water piers presented a difficult construction problem. The depth of the water prevented open cofferdam work or the use of the pneumatic process. It was proposed to sink caissons by the open well dredging method. But the depth of the water, a maximum tidal fluctuation of about 10 feet, the swiftness of the current during winter floods and at rip tide, and the softness of the underlying bay deposits, made the launching and sinking of a timber crib most difficult.

HOW PIERS WERE BUILT

Finally a unique method of constructing the piers was determined upon. This method involved, first, the driving of piles around the pier site and the erection of an octagonal shaped platform and eight steel towers containing winches with cables over sheave wheels located at top of frames. By means of this apparatus a steel shell that might be compared to a bottomless oil tank 81 feet in diameter was erected and lowered through the water into the mud. This shell penetrated to a depth of 15 to 50 feet, depending on the compactness of the mud. The shell was built up of circular sections 10 feet in height. Each section was bolted to the top of the shell as it was gradually sunk into the water. When the shell had touched bottom, it was filled with sand dredged from the surrounding waters. The island area of sand thus created within the shell permitted the exact staking out and fabrication of the steel cutting edge of the caisson that was to be sunk to rock.

WORK ABOVE WATER

Portable steel forms were erected above the caisson cutting edge and reinforcing steel placed in them. Concrete was then poured in successive lifts of 10 feet in height. All this work was done above water and enabled the working crews to pour tested concrete of desired quality and strength; it also permitted them to exactly center and orient the concrete mass as it settled toward bedrock. The caisson was so designed that it contained six wells



Placing 60-foot girder on Benicia Bridge in temporary position for turnout to falsework on December 11, 1929.

by means of which sand could be removed from the bottom of the caisson. As the sand was removed by means of clamshell excavators the caisson gradually settled to the underlying strata.

DEEP-SEA DIVER USED

Upon landing the caisson at or near bedrock, and after the greater part of the material immediately above bedrock had been removed by hydraulic jetting and clamming, a deep-water diver was sent down to explore the bottom. He telephoned from deep water the conditions existing within and under the caisson, and gave accurate information as to the penetration of the cutting edge of the caisson into the foundation rock. In each inspection he brought to surface samples of the rock he encountered, which furnished helpful information.

It is believed that this was the first time that a deep-sea diver had been used in the construction of bridge piers sunk to such great depth of water. His inspections permitted the engineers to verify the diamond drill borings and to definitely know the nature of the bedrock formation. The inspections also assured that the bridge piers are actually resting on bedrock, that the full bearing has been secured and that an interlocked connection has been established between the concrete and steel cutting edge and the bedrock.

The deepest pier is at the north end of the lift span. It is 207 feet from bedrock to bridge seat. It has a base area of 40 by 60 feet and its height is equivalent to the height of a 20-story building. It weighs some 19,000 tons. There are 10 main bridge piers and 22 pedestal piers on viaduct ap-

Erection of superstructure and construction of piers on Benicia Bridge with temporary span in place March 21, 1930.

proaches. More concrete went into the construction of any one of the 10 main piers than was used in San Francisco's loftiest skyscraper at the time .

FALSEWORK SPAN

Another unique feature of construction was involved in erecting the steel spans in the superstructure. Various methods were considered, but it was deemed not possible to successfully and economically use timber piling owing to the depth of water, softness of underlying mud, water current, and height of piers above water. It was finally decided to use one of the steel spans as falsework for the erection of all other steel spans. This span finally took its place as the most northerly span in the bridge. It was erected on piling sunk in the shallow waters at the south end of the bridge. On its completion, it was floated by means of two steel barges, from its original position to a position between the first two deep water piers at the south end of the bridge. The span was rested on shoulders provided in the construction of the concrete piers. When in position, the top of the falsework span was below the level of the permanent span. After the permanent span was completed, the falsework span was again floated on steel barges and moved into a new position between the succeeding piers.

The steel superstructure consists of seven 526-foot through Warren truss spans; two deck spans of 264 and 504-foot lengths; one 328-foot vertical lift span; a 560-foot viaduct at the south end and a 220-foot viaduct at the north end. The south approach involved the construction of 1.35 miles of track, branching from the

Floating span No. 19 into position on the Benicia Bridge September 29, 1930.

main San Joaquin Valley line near Martinez. The north approach required the construction of 4.57 miles of new track, including an 1860-foot viaduct. A new station was built at Benicia Junction. Ninety-five per cent of the ships using Suisun Bay can pass under the bridge, which has a clearance of 70-feet above mean higher high water. The vertical lift span erected over the deep water channel is a marvel of engineering skill and can be opened to a clearance of 135 feet in 90 seconds. It is operated by electricity and there is a gasoline engine for auxiliary or emergency use.

CAPACITY OF BRIDGE

The bridge was designed to carry a load its full length 50 per cent heavier than the trains then being operated. It was designed to carry double-headed consolidation locomotives with 90,000 pounds per axle on each track. These locomotives may be either followed or preceded by a uniform load of 7500 pounds per foot. A 50-ton box car fully loaded weighs 169,000 pounds, or only 4200 pounds per foot. The bridge, therefore, can carry locomotives 50 per cent heavier than any the company used at the time of its opening, either followed or preceded by train loads the full length of the bridge which would be 50 per cent heavier per foot than the present train loads.

Lighting codes of land, sea and air are installed on the bridge. Besides the usual maritime lighting system and the railroad signals, the bridge is topped by a series of red lights and a giant 24-inch signal beacon of 2,000,000 candle power which every 30 seconds flashes its signal light to aviators.

Surveys were begun in June,

1927, but that was not the first time consideration had been given to the construction of a bridge across this arm of San Francisco Bay. The first rail line to the bay was built from Sacramento by way of Stockton and Niles Canyon in 1869. The heavy grades of Altamont Pass made this route unsatisfactory and in December, 1879, there was completed the more direct low-level route through Port Costa and across Carquinez Strait to Benicia and Suisun, where connection was made with the line into Sacramento originally built by the old California Pacific Company.

HISTORY OF FERRIES

A bridge across Carquinez Strait was not considered economically feasible at that time. The "Big Four" railroad builders may have envisioned the development that was to take place in the next 50 years, but there was not then the traffic to justify such an investment as a bridge. The ferry steamer "Solano" was built to carry passenger and freight trains across the strait.

Constructed at the old Central Pacific shipyards in West Oakland, this huge ferry boat attracted international attention. It was the first time that the principle of a truss bridge was used in constructing a hull. Being 420 feet long, 116 feet wide, and 17 feet high, it was the largest ferry boat in the world. It had a displacement of 5450 tons and was capable of carrying on its four tracks, two locomotives and 24 passengers cars, or two locomotives and 36 freight cars. Its trial trip on November 24, 1879, was the occasion for a big celebration. Charles Crocker, then president of the Southern Pacific, headed a delegation of railroad and public officials aboard the boat. Whistles from bay craft and from docks and factories along the waterfront greeted the vessel as it circled the bay. When the ferry arrived at Benicia, a salute of 26 guns was fired from the government arsenal.

The "Contra Costa," also built at the West Oakland yards, was added to the service in 1914. It was 13 feet longer than the "Solano," two feet higher, and had a displacement of 7198 tons. Its carrying capacity was the same. With the completion of the bridge both of the boats were returned to the shipyards where they were dismantled.

Late in the 80's and again in 1904, various sites for a bridge were considered. Test piles were driven, but the surveys did not reveal the exact character of bedrock. It was once proposed to build a low-level bridge consisting of swing draw span and ballast trestle approaches, but the War Department refused permission for the structure. A crossing near Antioch was also disapproved. The existence of well established earthquake faults, together with other unfavorable conditions, caused the rejection of all routes proposed over Carquinez Strait.

Complete surveys, designs and estimates were made in 1927. Diamond drill tests over the present site from Army Point to Suisun Point revealed that rock extended across the channel at varying depths. Geologists and paleontologists making microscopic studies of the fossils obtained in these borings, concluded that no earthquake faults crossed the bridge location. However, all the piers are designed to resist earthquake vibrations twice the intensity of the one that accompanied the San Francisco disaster of 1906. The concrete used in the piers has a compressive strength of 2500 pounds per square inch and a tensile strength of 400 pounds at the end of 28 days after pouring. The piers have 30 pounds of steel reinforcement per cubic foot.

Final run of the ferry "Solano" the day it was replaced by the Benicia Bridge.

FAST CONSTRUCTION

The first shovel of dirt was moved at Suisun Point on May 3, 1929, but actual construction on the bridge site was not begun until the month following. Its completion ahead of schedule set a record for engineering projects of the kind. The placing of 21,000 tons of steel in nine truss spans, the lift span and towers and in the viaduct approaches, was completed in 11 months.

Surveys, estimates and all preliminary negotiations were carried out by C. R. Harding, then engineer of standards under former President William Sproule.

Construction work was carried on under the direction of Mr. Harding, later assistant to President Shoup, and W. H. Kirkbride, engineer of maintenance of way and structures. They were assisted by B. W. Rear, engineer of bridges, and H. I. Benjamin, assistant engineer of bridges, who were in charge of the field work. S. A. Roake, chief designer, designed the foundation and superstructure.

FACTS ABOUT THE BRIDGE

The structure is 5603 feet long — the longest and heaviest two-track bridge west of the Mississippi at the time of its construction. It consists of seven 526-foot through truss spans, two deck spans of 264 and 504-foot lengths, one 328-foot through vertical lift span, a 560-foot viaduct at the south end and a 220-foot viaduct at the north end.

Entire project, including six miles of track approaches, cost $12,000,000.

Constructed in record time of 18 months, work began in April, 1929. First train across on October 15, 1930.

Total weight of steel in superstructure is 44,000,000 pounds, in-

cluding 25,000,000 pounds silicon steel, 5,500,000 pounds of heat treated eye-bars, and remainder carbon steel.

The 11 main piers and 22 pedestal piers required 105,000 cubic yards of concrete and 1500 tons of reinforcing steel. The largest pier is 207 feet from bedrock to bridge seat, or the height of a 20-story building, and has a base 40x60 feet. More concrete was poured into any one of the 10 main piers than was used in constructing San Francisco's largest skyscraper up to the time of its construction.

Clearance of 70 feet above water is provided, which will clear 95 per cent of vessels passing under the bridge. The 1580-ton lift span, heaviest in America at the time, can be lifted to a clearance of 135 feet in 90 seconds.

Lighting codes of land, sea and air are installed. A 24-inch 2,000,000 candle power signal beacon atop the lift span tower flashed its beam every 30 seconds.

Unusual features in construction included use of deep-sea diver to examine pier foundations; construction of piers resistant to earthquake shock; creation of artificial island of sand enabling concrete piers to be constructed above water and gradually sunk to bedrock; and temporary use of a permanent deck span as falsework in construction of other spans.

The bridge is built across Suisun Bay, in the upper reaches of San Francisco Bay, and is located about a mile and a half east of the former train-ferry point between Benicia and Port Costa.

Material adapted from article in SOUTHERN PACIFIC BULLETIN for Nov.-Dec., 1930. For additional details and pictures of ferry service see "Railroading on San Francisco Bay" in Issue 175 of THE WESTERN RAILROADER.

Antelope & Western

The narrow gauge operating museum of Hal Wilmunder at Roseville will be dedicated on Sunday, June 5. The R&LHS will sponsor a group trip from the Bay Area via the SP "Senator," leaving S.F. at 7:05 a.m., Oakland 7:35 a.m., with charter bus service from Sacramento to the Antelope & Western layout. Fare $7.50 including both train and bus. Tickets from Don Thrall, 610 Arlington, Berkeley 7, Calif.

Annual Narrow Gauge Trip

The Rocky Mt. Railroad Club will run its annual roundtrip from Alamosa to Silverton via Durango over the D&RGW narrow gauge on May 28-30. Rail fare is $21 for the three day trip with meals and overnight accommodations extra. For tickets write Rocky Mountain RR Club, P.O. Box 231, Denver 1, Colorado.

ICC Abandonment Orders

As of March 4, 1960, the Interstate Commerce Commission issued the following orders:

Granted Southern Pacific permission to abandon portion of its Biola line between milepost 194.094 at or near Kerman to milepost 199.934 at or near Biola, approximately 5.849 miles in Fresno County, California.

Granted permission to Longview, Portland & Northern to purchase portion of Yacolt branch of Northern Pacific extending from a point northeasterly of Ampere to a point north of Yacolt, 23.585 miles, all in Clark County, Washington.

Bay Area Milwaukee Road Trip

The big Memorial Day trip out of the Bay Area May 27-30 will be Bay Area Electric's Milwaukee Road electrification tour to Butte, Montana, and return. The tour will leave Friday evening, May 27, via Western Pacific to Salt Lake City, thence via Union Pacific to Butte, then westward over the Milwaukee Road by daylight behind an electric locomotive to Seattle. The UP takes over the run to Portland, where the Southern Pacific returns the group to the Bay Area. Fares start at $125 coach, $150 upper, $175 lower, $195 roomette, $190 bedroom, $205 compartment, and $225 drawingroom. Reservations from Victor DuBrutz, 314 15th St., Oakland, Calif.

Railfan Tour of Mexico And Central America

The Pacific Coast Chapter, R&LHS and Cal-Nevada will operate a tour October 6-23 to Central America and Mexico to tour the highlights of remaining rail operations. The group will fly to San Salvador and work its way back by rail starting on the narrow gauge Salvador Railway, then to the International Railways of Central America, United Railways of Yucatan, Streetrailways of Vera Cruz, Mexican Railways (steam, diesel and electric), street railways of Mexico City, and Pacific Railway (SP de Mex.).

Fares: $625 upper, $650 lower, $700 compartment, $750 drawing room from San Francisco ($25 less from Los Angeles). $50.00 deposit required. Write Arthur Lloyd, 974 Pleasant Hill, Redwood City, California, for detailed announcement.

Southern California Trips

The Pacific Railroad Society plans a Labor Day Weekend trip September 2-5 of some 1800 miles going via Santa Fe from Los Angeles to Stockton, Western Pacific to Bieber, Great Northern to Hambone, McCloud River RR to Mt. Shasta, Southern Pacific to Montague, Yreka Western to Yreka. Returning via Yreka Western and Southern Pacific to Los Angeles. For details and reservations: PRS, P.O. Box 5279, Metropolitan Station, Los Angeles 55, California.

The Golden West Railfan "Club" will run a Memorial Day weekend trip May 27-30 via Santa Fe to Stockton and Western Pacific to Reno and return via the same route with side trips to Bieber and Quincy (Quincy Railroad). Golden West Railfans, 215 West 5th St., Room 323, Los Angeles 15, California.

Northwest Excursion Notes

PNW Electric Ry. Ass'n will run an excursion over the Union Pacific out of Portland, Oregon, Sunday, May 15, to Madras in the Deschutes River Canyon. The train will leave Portland Union Depot at 8:00 a.m. and return at 7:00 p.m. Fare will be $6.95 including tax from PNERA, Box 62, Tualtin, Oregon.

The same group will operate a trip out of Portland on Sunday, July 24, via SP&S to Vernonia, Oregon, at a fare of about $4.95 including lunch.

Railroad excursion fans in the Seattle area interested in "Casey Jones" Excursions should contact the promoter, Miss Carol Cornish, Studio 907, Pine Street, Seattle 1, Washington.

Postal Changes End Local Runs in Northwest

The Northern Pacific retired local trains 5 and 6 between Seattle and Spokane on March 31 due to the removal of the postal cars from the consist. The removal of the postal revenues cut $145,000 from the receipts of these two trains, thus all service on these two day trains was ended.

Postal changes on the Seattle-Vancouver, B.C., run also resulted in the Great Northern removing the evening run of its famed "Internationals" with trains 361 and 362 being removed March 31. The removal of mail would cut revenue about $90,000 per year on these trains, the Great Northern announced.

Nacozari Notes

When steam was abandoned on the Nacozari Railroad running between Agua Prieta and Nacozari, Sonora, Mexico, 78 miles, it was replaced with Baldwin diesels SP 5200, 5201, and 5202. These three units were previously in service out of Albany, Oregon.

These units equipped for multiple unit operation weigh 263,000 pounds each and with the A1A-A1A wheel arrangement make the weight of each unit on the drivers approximately 176,000 pounds. This, along with their 1500 horsepower (5202 is 1600 horsepower) fit in perfectly with the weight restrictions on the Nacozari Railroad.

Units actually operate out of the SP roundhouse at Douglas, Arizona, as did the steam engines.

—Clyde Shifley

SP Notes

Word from Owenyo has it that the "Slim Princess" closed down as of Friday, April 29. On that date the last train gathered up all the cars and left some at Laws and the rest at Keeler. The lone remaining steam locomotive, No. 9, was hauled dead on April 25 to Laws where it will be presented to the City of Bishop. The Bishop Chamber of Commerce is making efforts to have the State Beaches and Parks Commission take it over for a tourist attraction.

SP commute coach 2134 is now out of the Bayshore shops sporting the grey paint job. It was the last car of the old olive green paint in commute service. There are still several main line cars with the green paint, but as they come in for major overhauls, they will no doubt find their way to the scrap dock.

With the start of daylight saving time, Sunday, April 24, a number of changes took place on SP mail trains. The trains were greatly speeded up with most stops eliminated — stopping only at the larger cities.

In February, the ICC told the SP to keep trains 5 and 6, the "Argonaut," running for another year between New Orleans and Houston. The SP had applied to take the train off.

Saturday, Feb. 27, saw the end of the Mission Bay facility which has served locomotives since 1906. Diesel 4812 was the last to leave on that date as it backed down to take train 112 out for San Jose. The area is now being razed for sale to an industrial user. Diesels now are serviced and given minor repairs at a new facility at the old coach rip track at 7th and Townsend. Heavy repairs go to Bayshore.

—Fred Stindt

RAILWAY AGE

The Santa Fe has ordered 500 50-ft., 70-ton mechanical refrigerator cars. Milwaukee and Rock Island railroads are studying possible merger. Santa Fe has purchased a 455-acre industrial park in Phoenix, Arizona, adjoining its 400-acre Camelback district acquired several years ago. Santa Fe plans three additional microwave installations in 1960: San Bernardino to Bartow, Calif., Barstow to Seligman, Ariz., Amarillo, Tex., to Topeka, Kan. This will join the installations completed in 1959 between Los Angeles and San Bernardino and between Bakersfield and Barstow.

The Union Pacific has ordered 20 44-seat, legrest reclining seat coaches from Budd Co., and 25 baggage cars from ACF for late 1960 and early 1961 delivery. Union Pacific has also ordered 300 50-ton plug-door box cars, 300 70-ton flat cars and 200 50-ton insulated box cars from company shops; 200 gondolas and 150 covered hoppers from Pullman Standard plus 200 gondolas from an unidentified builder.

The Western Pacific has ordered $3¾ million worth of freight cars including 200 70-ton 50-ft. insulated box cars from Pacific Car & Foundry, 50 70-ton 56-ft. flat cars from Thrall Car and four 70-ton Airslide covered hoppers from General American. In addition the Sacramento Northern has ordered 10 70-ton covered hoppers from ACF. All WP-SN cars under order will be equipped with roller bearings.

The Wenner-Gren Yukon railroad in British Columbia will start construction April 1, according to Premier W. A. C. Bennett of the Canadian province. The line will be built as a conventional railroad instead of the monorail dream.

PCC Tested on Long Beach Run

A PCC streetcar was tested on the Metropolitan Transit Authority Los Angeles - Long Beach run on February 26. The car was a narrow gauge PCC 3148 specially equipped with standard gauge trucks loaned by the Municipal Railway of San Francisco from its car 1024. The San Francisco car was placed on blocks at Geneva carbarn while the trucks went by SP piggyback service to Los Angeles for the test.

Various reports are about as to what the Los Angeles Transit district may do including rebuilding the existing cars, re-trucking the narrow gauge PCCs, buying second-hand PCCs, and even purchasing the old Key System units.

New Diesel for Arcata & Mad River

On March 2 a General Electric 44-ton diesel electric locomotive passed through Willits on the Northwestern Pacific destined for the Arcata & Mad River Railroad. It was lettered Fernwood, Columbia & Gulf Railroad D-3. (This road is at Fernwood, Mississippi). The locomotive is MU equipped.

—R. L. Houweling

Seeks $300,000 Damages

A $300,000 damage suit was filed against the Southern Pacific by the wife of Dannis F. Bean, killed by a switch engine on a Menlo Park spur track last Oct. 25. The train's engineer said Bean sat on the tracks drinking whiskey and ignored the whistle.

November Vote Doubtful For Rapid Transit

Prospects for a place on the November ballot for the Bay Area Rapid Transit bond issue appear dim at this moment due to the uncertainties of a final construction plan being ready for the various approvals prior to the placing of the issue on the ballot.

Many of the local cities and counties have expressed objections to preliminary plans offered by the district's engineers. For the most part the objections have centered on the elevated structures offered with demands made that the routes go on the ground or in subways.

On the Peninsula route the district engineers have offered a grade separation plan for 23 new overpasses and underpasses estimated to cost $31,177,300 to eliminate all present grade crossings of both the SP and rapid transit between San Bruno and Palo Alto.

The main hurdle as of this moment is the ever increasing costs as estimated by the engineers which may soon reach the 15 per cent of total assessed valuation which is the district bonding limit . . . some $800 million.

Arthur Caylor Reports

(San Francisco News-
Call Bulletin)
March 16, 1960

Rail Brotherhoods Eye Transit

Quite naturally, the railway brotherhoods don't like the idea of rapid transit taking over the Southern Pacific's commute business — and their jobs along with it. So they are putting together a counter-proposal.

Core of their plan, my men report, is to force the Southern Pacific to perfect equipment and service in exchange for union concessions as to work rules which would allow operation of short trains with fewer men.

The final touch needed, in the brotherhood view, to put this betterment across while protecting their jobs is free transit in San Francisco — at least to and from the depot. That would encourage commuters to leave their cars at home and try the train.

It's becoming obvious, of course, that whether we have rapid transit or not, commuters and San Franciscans alike have to be induced, somehow, to quit driving their own cars downtown.

In all the talk about area transit, freeways, shopper garages and what-have-you, no solution of the congestion problem has been proposed which doesn't involve this one thing. Even Khruschev, when here, said they'd never put up with one-man-one-car nonsense in Russia.

So don't be surprised if the city's Public Utilities Commission decides to find out before long what free transit would cost and what benefits the public might gain from it. Look for this to happen about the time Charlie Miller retires as manager of the Muni.

Muni 1003 Fund

Funds for the purchase and storage of Municipal Railway "Magic Carpet" car 1003 are sought by the Bay Area Electric Railway Association. Donations and pledges should be sent to Vic DuBrutz, treasurer, BAERA, 314 15th St., Oakland 12, California.

THE ELECTRIC INTERURBAN RAILWAYS IN AMERICA

George W. Hilton and John F. Due, Stanford University Press.

To most railroad fans the electric interurban railway holds a special interest for it represented an era of rail transportation that came down to the everyday level of community life to many suburban and rural communities throughout the country.

This is a new treatment of this colorful period written by two economics professors, one from Stanford and one from the University of Illinois. They have outlined the whys and wherefores of interurban "business" plus 300 individual histories of interurbans in the United States and Canada.

They have succeeded in avoiding the dry prose of the usual economic treatise thanks to a liberal use of specific references to individual companies from coast to coast.

The authors have avoided the pitfalls of technical jargon of both the economics and railroad fields. They have a most readable product in this endeavor and a most enjoyable one to anyone interested in this era of American history.

They have in their individual histories encompassed some 300 companies in a project that reflects enormous research. The job has been well done and is the sum total of the efforts of the authors and the rail historians in compiling the history of the interurban.

This book fills a need to those who have fond memories of the interurban car and wonders why it was built and why it disappeared.

$9.50 from the Book Dept., The Western Railroader, P.O. Box 668, San Mateo, California.

ELECTRIC RAILWAYS OF MICHIGAN

A giant 220-page bulletin by the CERA on the electric interurbans of Michigan is a fine addition to any railfan's library. Our readers received the descriptive material last month and if you haven't sent in your $9.00 it would pay you to do so now. While largely pictorial in form it gives an excellent coverage of the state and covers the now gone electrics of Michigan. CERA, P.O. Box 503, Chicago 90, Illinois.

THREE LITTLE LINES

The Durango Herald-News has issued a reprint of the R&LHS Bulletin stories on the Silverton narrow gauges built by Otto Mears to serve the mines in the mountains. While the author seems to lack the interest in motive power usually expected in railfan publications, it is very well printed and for just $2.00 a good bargain. From the Book Department, The Western Railroader, P.O. Box 668, San Mateo, Calif.

Cable Break

Service on the Powell street cable car line was restored April 12 after being halted nearly 2½ hours by a broken cable. The break also stopped cars on the other two lines for 45 minutes.

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Center Entrance Cars Gone

The last of the "famed" Pacific Electric 600s were retired when the Los Angeles Metropolitan Transit District disposed of its remaining 1800s, formerly used on the Watts local. The 1801, 1814, 1815, and 1812 were purchased for $178 each by Walter Abbenseth and were moved March 9-14 to the Orange Empire Trolley Museum on permanent loan. Cars 1800, 1802, 1803, 1807, and 1809 were sold for scrap and moved to Terminal Island on March 19.

NWP Motive Power Notes

All of the 800 and 900 h.p. EMD engines on the Northwestern Pacific are now receiving the new Southern Pacific grey and red paint jobs. SP 5328 has been returned and SP 5332 has been received in its place. The SD-7 diesels have all received the new paint jobs except the 5315 and 5332. —R. L. Houweling

Ferry Notes

A new promotion in San Carlos, California, calls for the conversion of the former SP-Golden Gate and later Richmond - San Rafael ferry "Klamath" to a dining and dancing resort on the bay shore opposite San Carlos airport with the trade name "Harper's Ferry."

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